

B.A.R.C.'s Bark

Volume XXIII - Issue 7

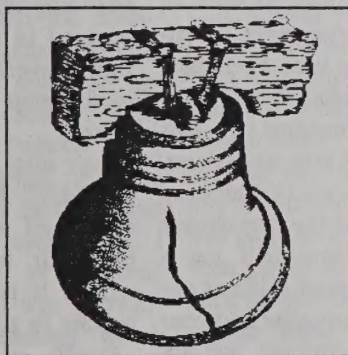
July, 1998

President's Notes

Boy! Am I glad that June is over. what a busy and exciting month. Of course, "Murphy" struck my plans for Field Day. Our plans to be moved into our new house got delayed until the last weekend of June. What incredibly bad timing! I did manage to take a couple of hours off Saturday evening and visit the two BARC Field Day sites. I stopped by the BARC Sr. site first and there was a lot of activity. As I was arriving, there were a couple of visitors touring the facilities and I even got a chance to operate for an hour or so on Bernie's 20M SSB station. Chuck, KI0AG's satellite station crew was busy making contacts on everything that passed over the horizon. Bob, NQ5P's CW station was active on 40M as well. For a last minute Field Day operation, it sure looked pretty well organized and everyone was having fun. Chuck's solar powered battery banks were awesome!

Down the road a mile or so, the BARC Jr. encampment looked impressive! Their new tent was bustling with activity. No chance here of my operating an empty position! Steve London, N2IC, a world class contest, was busy providing operating tips and logging for Walt, KC0BPC who was holding the frequency on 20M CW and working towards his 110th CW contact like a pro. Jeremy, KI0LK, the BARC Jr. Extra (whose call was being used at the BARC Jr. site) was busy logging his 70th contact on 40M CW while Crystal, KC0AJF worked 40M SSB. The bicycle powered 2M rig was in full operation as usual with one

(See "Notes" cont. on page 2)



Meeting Minutes

Board Meeting - June 1, 1998

Secretary's Report: The minutes from the May Board meeting were read and adopted.

Treasurer's Report: We continue to remain in good financial condition.

Trustee's Report: A new tail message has been programmed to let people know about VE testing, much the same way the meeting tail message works. S-Com has a new controller version out which adds or enhances several programming functions.

Rip/NV0M would like to upgrade our controller, which hasn't been done in several years; cost is about \$100. The Board unanimously approved the request.

BARC Jr. Liaison Report: Crystal and Blair have given their speeches at the Dayton Hamvention and did very well. Carol Perry

was appreciative as always, and invited BARC Jr. to send 1-3 kids next year! Blair was asked to write an article for World Radio magazine.

BARCfest Report: The ARRL HQ Executive Committee approved BARCfest as the host for the Rocky Mountain District convention. The major door prizes have been purchased. Promises for a number of other door prizes are already coming in.

Field Day Report: Choosing a site is proving to be difficult; may contact the American Legion.

July Picnic: We are confirmed for Martin Park (Table Mesa area, same as last year's picnic) for July 21.

MS Walkathon: BARC received a nice

thank-you from the MS Society for our help at the Walkathon. It raised \$37,000.

New Business: NYX.net has offered Internet access if BARC would like to use it for a packet-to-Internet gateway. Since BARC does not currently have a packet station running, Jack/WM0G suggests that perhaps BCARES might be a better organization for this. There was also lengthy discussion on what kind of supervision such a station might require. Discussion tabled pending input from BCARES.

Jack/WM0G suggested BARC should get an electronic camera since paying for halftones so photographs can be printed in the newsletter is getting expensive. Randy/K0RCC suggested that a scanner would be a cheaper and more versatile option -- anyone could then take and donate pictures, and they then could be scanned into the editor's computer. Jack will check prices and bring the matter up at a general meeting.

Jack/WM0G suggested a contest for a photo representing Boulder be run for the Club QSL card illustration. He'll slip it into the June newsletter since there is space.

The next meeting is scheduled for July 6 at Rip & Ellie's house.

Submitted by:

Randy Cassingham/K0RCC, BARC Secretary

In This Issue:

- President's Notes - Pages 1, 2
- BARC Meeting Minutes - Pages 1, 7
- Editor's Corner - Page 2
- BARC Jr.'s "Yap Yap" - Pages 3, 9
- Video Views-Parts VI & VII - Pages 4, 5
- BARC Meeting Calendar - Page 5
- Future Hamfests, etc. - Page 6
- NQ5P's Ham Talk Column - Page 9
- BARC Picnic Site Map - Page 10
- BARCfest Information - Pages 11, 12
- Field Day Pictures - Page 13
- Membership/Renewal Form - Page 14

---- Serving the Boulder Amateur Radio Community ----

Boulder Amateur Radio Club**P.O. Box 17362****Boulder, CO 80308-0362****President - Jack Ciaccia, WM0G**

303-665-8037

WM0G@aol.com

Vice President - Jim Layman, N0VLE

303-665-2711

jim.layman@noaa.gov

Sec'y - Randy Cassingham, K0RCC

303-664-5366

K0RCC@thisistrue.com

Treasurer - Dave Casler, KE0OG

303-665-0510

KE0OG@msn.com

Trustee - Rip Van Winkle, NV0M

303-494-5578

NV0M@ix.netcom.com

BARC Jr. - Ellie Van Winkle, N0QCX

303-494-5578

NV0M@ix.netcom.com

Membership - Dan Wisotzkey, N0NLS

303-665-8367

N0NLS@aol.com

Newsletter Editor - Mary Ciaccia

303-665-8037

FAX: 303-665-8703

WM0G@aol.com

BARC Repeater

146.700 (-600 KHz offset)

100 Hz CTCSS

BARC 24 Hour Phone Number

303-380-6540

BARC E-Mail Address

BARC@pobox.com

BARC Website<http://www.thisistrue.com/barc.html>**Monthly Meetings are held on the****Third Tuesday of every month****at NIST @ 7:30 PM (unless notified)***("Notes" cont. from page 1)*

of the BARC Jr.'s on the pedals while another made a QSO. Their new, hinged tower and tri-bander glistened in the moonlight while under the canopy tents an impromptu old fashioned "Hootenanny" was going on lead by Rich, N0SH, whose untiring efforts helps make Field Day for the BARC Jr.'s such a success. I even got a chance to mumble a few lines to the Eagles' song "Hotel California" (like I ever knew the words) while Eric, KG0YS, one of the original BARC Jr.'s, accompanied on his electric bass. These guys do it right! fun, excellent facilities, great food and top-notch equipment ran by dedicated BARC Jr. operators and assisted by their ever helpful Elmers.

Next year should be another really great Field Day event for BARC and BARC Jr. Now that the BARC Sr.'s have decided to keep the FD crew together for '99. We should be able to enhance their efforts with badly needed new antennas, towers, etc.. for their site. It comes to mind that we should consider finding a place to store all of the BARC/BARC Jr. equipment investment for the balance of the year. Preferably at an indoor facility. Any ideas ?

If you were at the last meeting you now have a pretty good idea on how to foxhunt. Dave, KI0HG did a superb job in educating us on the nuances of finding the ever elusive "fox". And, this month you will get a chance to use these new found skills at our annual picnic. Bring your appetite and your HT, DF arrays, or if your like me, just use your body as an attenuator (I think I'm at least 90dB down!). The BBQ is free. Just call the BARC 24 hour phone line and let us know how many are in your group. A map to Martin Park is in the newsletter and we can talk you in on 146.70. Our VP, Jim, N0VLE who is with NOAA, promises us superb weather!

73, de Jack, WM0G

NOTE: B.A.R.C.'s Bark is copyright 1998 and published monthly by the Boulder Amateur Radio Club, Boulder, CO.

The design and content may be reproduced in any form, by any publication, without prior consent, as long as proper credit is given to the source, this publication and the issue date. Permission is limited to use for non-commercial purposes for the benefit of the amateur radio community. Permission for other purposes must be obtained in writing.

Editor's Corner

Hi all you BARC's Barkers~

Is it summer yet? Okay, okay! If it's not where has all this heat come from? And amidst all of it, your's truly, my OM, WM0G along with Brat, CW2NS, the diabetic cat, relocated. It took two 2-ton truck loads, 14 hours, 137 packed boxes, all of our furniture and then some - it was like the Clampetts revisited without granny, though the rocker is still intact. We're as settled as anyone could be this soon. WM0G's radio station is up and ready for business and the computer's up too and sportin' a brand new IBM Options Scanner thanks to the BARC Club. This will make short work of all those photographs, documents and articles of particular interest to each and everyone of you.

My trusted reporter tells me that FD was a huge success and thanks to Dave, KE0OG, for all those wonderful photos which we have scanned in for all to see this month. And for those of you who are attending the July 21 picnic, we have also scanned in a map of the picnic area for your convenience. The route is a bit tricky so the map should make your trek a bit easier.

Don't miss Eric Permut's, KG0YS, story on *BARC Jr. From the Roots* - a very well written compilation of how BARC Jr. began. Eric, you are one fine writer. It is my joy to bring such fine articles to all of you each month.

Finally, a very big thank you to Rip, NV0M and Ellie, N0QCX for being so kind as to hold the BARC board meetings at their house the past couple of months while we were in the process of moving.

Have a great month, everyone.

73 & 88, Mary

To submit items for the BARC's Bark newsletter send them to: Mary Ciaccia at PO Box 21362, Boulder, CO 80308 - 4362 or Fax them to 303-665-8703 or EMail them to:

WM0G@aol.com.

Articles need to be to the editor by the end of the month. Please be sure to put your name at the top of the article. -- ed.

Yap Yap

"The Voice of BARC Jr."

BARC Jr. Officers July - December 1998

President - Tyler, KB0SHT

Vice President - Chapman, KB0PON

Secretary - Walt, KC0BPC

Co-Treasurers - Crystal, KC0AJF &
Amory, KC0BPB

Young Hams Net

Sundays at 7:00 PM
146.700 (-600KHz Offset)

BARCfest Donations Now Being Accepted !!

Now is the time to give that old ham "treasure" to a good cause. BARC Jr.'s will have a swap table at BARCfest and the proceeds are used for their expenses. Call Ellie, N0QCX at (303) 494-5578.

to Rip's delight, many of us jumped right back into line to receive another jolt. Finally the day arrived when Ellie administered the novice class written exam to those who felt they were ready. I sat at my desk and pondered the multiple choice questions while trying to keep my knees from knocking too much. Obviously, the magic had not been flowing on that attempt. The second try turned out to be the charm for me. After conquering the five words-per-minute Morse Code test, I had only to anxiously wait for the letter from the Federal Communications Commission. (They're really the Friendly Candy Company. They just don't know it yet!) After close to four weeks, that felt more like four years, the blue block lettering from Pennsylvania came out at me from the mailbox like bargain-happy treasure collectors thundering out of a swapfest. My torch was definitely lit.

Our group of new hams and those studying hard for licenses continued to grow as word spread about the classes. Obviously, the opportunity to join the ranks as a radio amateur was much sought after by area youths. It became obvious that we had the true necessities for a club... members! One afternoon we gathered in the basement family room (it's called "da club room" now!) and brainstormed ideas. One definite issue was what we should call ourselves, as "The bunch of kids that get together every week with Elmers and learn radio stuff" could pose a problem in the long run. A nomination session followed by a vote remedied that situation. As we would likely not exist without the financial support and resources from the Boulder Amateur Radio Club, "BARC Jr." came out as the winner. (Please

forgive me, but I don't remember who nominated that name. If it was you, I hope you like kudos. You should be getting lot's of 'em.) Now that

we had a name, we just couldn't go on without all those other things that really make up a club. Officers were next on the list. We put our hands in the air yet again, and then that step was taken care of. Hopefully there weren't too many hard feelings.

Another contribution to the club was the "Junior Ham's Net". I provided a rough net control sketch, and the Castle Rock Repeater Group graciously provided us with the use of their first rate repeater once a week. Boom! A winning combination was formed. The weekly net, which became dubbed as "The Kids' Net," became tremendously popular. Not only did the net give new hams an opportunity to get out on the air in a comfortable environment, but they were able to practice the skill of net operation, which is crucial during special event and emergency operations.

The time had come to loosen our financial chain from our gracious host--BARC. The BARC Jr. treasury was formed. The club set up a checking account, and began to fill it with generous donations and J-pole antenna profits. The additional finances helped us to purchase learning tools such as electronic Morse tutors, license manuals, handbooks, code keyers, other literature, electronic kits, and more.

Not unlike the dog with the infamous BARC, the youth club could not get far ahead without leaving its mark many times along the way. BARC Jr. has made appearances at BARCfest, LARCfest, the Dayton HamVention, the Bighorn Radio Museum, the Squaw Mountain repeater site, several private ham "shacks", and the Alpha Power amplifier labs, to name a few. Not surprisingly, regardless of destination, the club was almost always invited back. The kids in the red shirts have never failed to leave impeccable impressions.

Today, BARC Jr. conducts business with an unmatched degree of professionalism. The

(See "Roots" cont. on page 9)



BARC Jr. From the Roots

One warm morning in August of 1992, I hopped on my garage-modified red mountain bike, waved to the contractors working on our house, and cruised down to my hometown Louisville Middle School. Upon arriving, I cable-locked my "wheels" to a rack and strode into the hallway, noticing the subtle odor of industrial cleanser and floor wax. After just a few more turns, I passed through the doorway of the only well-lit room in the school. I was immediately taken in by my surroundings, which pleasantly contrasted the dungeonous echo of the hallway. Inside, I found Dave Patton/KG0EW, at the whiteboard jotting down the phonetic alphabet. Rip Van Winkle/NV0M was explaining the capabilities of his grid dip meter to an attentive audience gathered around the table, and Ellie Van Winkle/N0QCX was introducing the contents of a Now You're Talking® book to a prospective new student. I was to be one of the approximately ten regulars at these weekly sessions, which were originally formed following a radio demonstration at the middle school. Occasionally we had the privilege of taking a ride to Rip and Ellie's house and holding class in their basement. I had never seen so many toys in one spot.

Over the next few weeks, we watched Dave demonstrate electricity "work" by drawing a comparison to waving a radio around in the air. Rip treated us to an electrical "jump" in the fingertips from a charged inductor. Much

BARC Jr. Calendar

Aug 8 - Picnic & Fox Hunt
Sep 27 - BARCfest & Youth Forum

VIDEO VIEWS from CHAUTAUQUA (Parts VI & VII of a multi-part ATV series)

By Jim Andrews, WA0NHD-TV

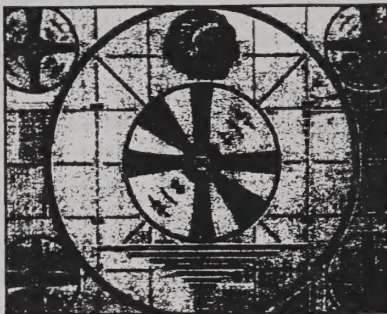
Part VI - TV Operating Procedures

Well now that you can receive ham TV pictures, have your own camera and transmitter, it is time to get on the air with your own pictures. Ham TV is considerably different than operating HF SSB or 2 meters. The biggest difference is the lack of other TV hams to communicate with. With such a small group of TV hams as we have here in Boulder County, simply turning on your transmitter and calling "CQ" as on HF SSB or "Monitoring" as on 2 meters will greet you with total, absolute silence and a snowy screen!

To have ham TV communications, you will need to prearrange your QSO's. This is the reason several of us active ham TV operators decided to start a weekly TV net. At least this way we have a target date and time each week to get on the air and have some chance of success in having a TV QSO. We presently are getting together each Wednesday evening at 7:30 PM. We are using the BARC 146.70 repeater for our two way audio channel. Our TV transmissions are typically on the 70cm band and use the Chautauqua Park TV repeater. If you can't make the Wednesday night net, don't hesitate to call on the landline another TV ham and arrange some other convenient time.

Most ham QSO's consist of numerous, short transmissions with each person in the net making a few short statements or asking questions and then turning it over to the next ham. Unlike using a telephone, which is a full duplex system, our ham HF SSB or 2 m FM conversations are always one way. In other words, as long as one party is talking it is impossible for the other parties in the conversation to interrupt. We use our receivers much more than our transmitters and thus our transmit duty cycles (ratio of transmitter on to off time) is typically very low. Television QSO's are dramatically different. They are full duplex and will have transmit duty cycles of 100% for many minutes or hours. Each TV ham will typically keep his TV transmitter on the air for the full length of time required to present his program for the evening.

Our ham TV transmitters include audio circuits to transmit hi-fi quality TV sound along with live, color pictures. Thus when receiving a ham's TV picture, turn up the volume on your TV receiver and you will also be able to hear him talking. The microphones on TV camcorders are not like our close talking mikes on our HT's or SSB rigs. Instead they are designed to be very sensitive and pick up sounds from a long distance.



Thus you will hear all the sounds in the TV ham's shack, including his kids playing, dogs barking, fish tanks gurgling, telephone bells, etc.

Typically in a ham TV QSO the ham transmitting will be showing his shack pictures and also

talking about what he is showing. All of his audio comes over his TV transmission. All of the other hams participating in the TV net will then be talking back to the TV ham and others in the net using 2 m FM on the BARC 146.70 repeater. In this manner we are running full audio duplex with both parties being able to talk simultaneously. If you were monitoring the 146.70 repeater when a TV net was in progress you may have wondered why you were only hearing one side of the conversation, this is the reason.

Can you hear the audio part of the TV transmission without having a TV receiver? Yes, if you have a programmable scanner capable of receiving wideband FM. Tune your scanner to the audio subcarrier of the TV signal. The audio subcarrier is located 4.5 MHz above the video carrier. For the Chautauqua park TV repeater the video carrier is at 421.25 MHz. Thus the audio signal will be found at 425.75 MHz.

Do we have to identify TV transmissions? You betcha! The FCC requirements are the same for TV as for CW, voice of packet. We must ID every 10 minutes. The FCC does allow a choice of methods for IDing. It can be either a video ID or audio ID or both. For audio IDing simply say your call letters the same as you would when using your HT. For video IDing it suffices to simply point your camera at your QSL card or some other sign showing your call letters. Another easy technique is to use the built-in titling capability in your camcorder. Most modern camcorders include the ability to program a title using a built-in character generator. I have my call

sign WA0NHD-TV pre-programmed as the "title" in my camcorder. To ID I simply push the "title" button on the cam corder and my call sign is superimposed across the middle of my TV picture. I also have a special circuit board which I purchased from Elktronics which automatically generates an ID TV picture every few minutes with my call sign. The Elktronics p.c. generates four different selectable color bar patterns and other custom programmed pictures. The Chautauqua Park TV repeater has an Elktronics video ID generator in it along with a Morse code CW ID generator.

73 de Jim, WA0NHD-TV

Part VII -- TV Antennas

In part 3 of this TV series, I briefly touched on the subject of antennas. I now want to discuss this topic further. For ham TV in Boulder County the activity is found on the 70cm and 23cm bands. The antenna Polarization being used is Vertical. Vertical polarization was chosen early on because we foresaw that most of the use of ham TV would be for BCARES operations. Whenever BCARES has been called out to provide TV pictures of an emergency or large public events, they have typically sent 2 or 3 teams out in the field carrying a camcorder along with a portable TV transmitter and battery in a back pack. As they walk around they need to be transmitting TV pictures. Thus a small omnidirectional vertical whip antenna makes the most sense for portable operation. BCARES has also occasionally run mobile TV where again an omnidirectional vertically polarized antenna is much more convenient. As a result the Chautauqua Park TV repeater is set up to operate using vertical polarization. In contrast, broadcast TV uses horizontal polarization where most reception is done from fixed locations such as homes with outdoor, directional beam antennas.

By now you have probably ordered a catalog from P.C. Electronics. Their catalog contains a selection of antennas which all work well for TV service. The HRO catalog is also a good source of TV antennas. A key item in selection of a TV antenna is operating bandwidth. The antennas sold by P.C. all have adequate bandwidth.

For a home installation with a directional yagi antenna on a rotator, the KLM 70cm (See "Antennas" cont. on Page 5)

1998 BARC Meetings, Programs and Activities

Jul 21 - BARC Annual Picnic and Fox Hunt. This year we will have a catered BBQ provided by BARC - RSVP with the number of members & family attending via the BARC 'HotLine' or via BARC's EMail address. After the BBQ, the "Foxes" will be let loose - Bring along your RDF gear and let's see who will reign this year as "Lord of the Foxes" - BARC's Picnic Site is Martin Park.

Aug 18 - "ATV Equipment, Antennas and Basic Theory" - Guest speaker will be Jim Andrews, WA0NHD. Jim will conclude his informative, multi-part ATV articles that have been featured in this newsletter with this ATV presentation and equipment demo. Meeting at NIST, Rm. 1107.

Sep 15 - "Time Coordination Around The World And How It Effects Radio Communications". Plus information on the atomic clock and the research going on here at NIST for an even more accurate clock. Guest speaker will be John Lowe from NIST. Meeting will be held at NIST, Rm. 1107.

Sep 27 - BARCfest and ARRL Colorado District Convention. The theme is "Youth and Amateur Radio". A youth forum will be featured and the forum moderator will be Rosalie White, WA1STO head of the Education Activities Committee from ARRL HQ. Meet your Rocky Mountain ARRL representatives. For more info check the BARC website at URL:

<http://www.thisistrue.com/barc.html>

Oct 20 - QRP Home Brew Night - Bring along any Home Brewed QRP Ham Radio gear (including kits) for **Show and Tell**. Guest speaker tonight will be Rich, W0HEP, President of the **Colorado QRP Club**, W0CQC. Meeting at NIST, Rm. 1107.

Nov 17 - Code Proficiency Test. - The code proficiency test will be held at 6:30PM prior to the regular meeting. Guest speaker will be Yardley Beers, W0JF with his presentation on "The Mathematics of Trap Antennas". Meeting at NIST, Rm 1107.

Dec 15 - "The Space Environment and it's Effect on Radio Communications" -

Presented by Dick Grubb, W0QM, acting director of the Space Environment Center. NIST, Rm 1107.

("Antennas" cont. from page 4)

antennas work great. They have three models with different numbers of elements, length and gain. They are the KLM 440-6X, 10X & 16X with 6, 10 or 16 elements and gains of 9dB, 11dB & 14dB respectively. The 6 element yagi is short enough to be ideal for portable operations where a bit more directional antenna gain is needed over a short whip antenna. They have full 420-450 MHz bandwidth. For 23cm I have a Down East Microwave loop yagi antenna. It has 24 loop elements on a 6 foot boom with 16dB gain. Both Comet and Diamond also make good omnidirectional, vertical, base station antennas in both single band and multiband versions.

For 70cm BCARES portable operation, we have found that the Diamond model RH-77 CA is a very good, very rugged, flexible rubber duck whip antenna with gain. It is 15" long with a BNC connector. For dual 70cm/23cm TV portable operation, I use the Diamond model RH-951S. It is 14" long with a BNC connector. It is claimed to be a triband 2m/70cm/23cm antenna, but it does not load well on 2 meters.

For 70cm mobile TV operations, BCARES uses the Larson model NMO-UHF gain whip antenna on a Larson NMO-MM magnetic mount base. A really excellent mobile antenna which I have recently discovered is the Diamond model NR-2000NA. It is a very good triband, 2m / 70cm/ 23cm antenna. It has gains of 3dB (2m), 6dB (70cm) and 10dB (23cm). For temporary installations I use it with the Diamond model DPK-4NM-N magnetic mount. We are presently permanently installing this antenna on the Sheriff's Dept. incident command vehicle along with a Diamond model MX-3000D triplexer which allows simultaneous transmit/ receive use on all three bands with a single common antenna.

The Chautauqua Park TV repeater's 70cm antenna is a DB Products DB-411, commercial grade, very rugged, four dipole element, vertical co-linear antenna. It has a cardioid pattern with 9dB gain. The cardioid null is positioned toward the Flat Irons. For 23cm, the repeater's antenna is four phased circular waveguide horn antennas arranged for vertical polarization. It is a home-brew antenna and was designed and built by Mike Laage, N0FZB. It has 13dB gain.

73 de Jim, WA0NHD - TV

BCARES Participation in "Mass Casualty Exercise" at Nederland, CO June 20, 1998

BCARES members participated in a Multi-agency, mass casualty exercise in Nederland on Saturday, June 20, 1998. ATV, packet and voice communications were provided. The 'mass casualties' were caused by the simulated collision of several vehicles with about 15 bicyclists.

The Incident Command Center was at the Nederland High School and the 'accident scene' was 50 yards west of the High School.

Agencies participating included: Boulder County Sheriff's Department (Lt. Larry Sterns and a Dispatcher), Fire Departments from Nederland, Longmont, El Dorado and Sugar Loaf Fire Departments (Nederland Fire Chief was Incident Commander). Additionally, ambulances (about a dozen) were provided from Nederland, Broomfield, and other Boulder County towns. Community Hospital in Boulder and the Flight for Life Helicopter also participated in the exercise. Media coverage included Channel 2 TV and the Boulder Camera.

ATV: BCARES provided ATV coverage from the 'accident scene' back to the County Sheriff's Incident Command Vehicle. Some antenna problems were discovered in the vehicle and they are being addressed.

Packet: BCARES provided packet radio communications from the Sheriff's Communications Vehicle to the Community Hospital in Boulder. A high power 2M transmitter, with a beam antenna was required to send packet radio messages from Nederland High School to Boulder Community Hospital, using the W0IA Packetcluster in Louisville. The beam had to be carefully placed in order to complete the link.

Voice: BCARES provided voice communications primarily through the BCARES 146.76 repeater. This voice link was used to verify that packet messages were received at each end. Additionally, the 146.76 repeater was used to send priority traffic. An autopatch was made through the 147.27 Longmont machine for a needy Fireman.

(See "Exercise" cont. on page 6)



Future Hamfests Calendar

Colorado State Convention and Denver Radio Club's Hamfest - August 16

Jeffco County Fairgrounds, 15200 W. 6th Ave. Golden, CO. 8:30 AM - 2:00PM. Admission \$4. Advance tables \$10 or \$12 at the door. Contact: Guy Reed, W5GR, 29875 Troutdale Scenic Drive, Evergreen, CO 80439-7705. Phone: 303-674-5389.

August 29 & 30 MARC Campfest / Swapfest

The 17th Annual Mountain Amateur Radio Club Campfest/Swapfest will be held at the Colorado Lions Camp, 4 miles North of Woodland Park on Highway 67 North. Free admission. Talk-in on 146.82. \$10 per space daily to camp and/or sell. Contact Don, AA0NW at 719-687-3692 or mail reservations to: MARC, PO Box 1012, Woodland Park, CO 80866 or via Email to: dsrtflwr32@aol.com

September 27 - BARCfest and Colorado District ARRL Convention

BARC's 45th annual swapfest and the 1998 Colorado District ARRL Convention will be held Sunday, September 27th from 8AM to 2PM at the Boulder County Fairgrounds. The theme is "Youth and Amateur Radio". A youth forum will be featured and the forum moderator will be Rosalie White, WA1STO of the Education Activities Division from ARRL HQ. Meet your Rocky Mountain ARRL representatives. Admission is \$4 at the door. Children under the age of 12 are free and young adults, ages 12 - 18, are 1/2 price admission or \$2. Table reservations are \$10/each prepaid (includes one free admission) or \$15/each at the door. There will be 4 HT's given away as door prizes. For more information and/or reservations, call the BARC 24 hour HotLine at: 303-380-6540 or via Email to: BARC@pobox.com. A reservation form is on the BARC website at: <http://www.thisistrue.com/barc.html>

Military to Help Save 70 CM

The ARRL has called out the United States Navy to help save the 70 centimeter band from being forced into a sharing agreement with land mobile users (LMCC) or possible reallocation of a segment of the band to their exclusive use. Speaking at last week's Rochester Hamfest, ARRL first vice president Steve Mendelsohn, W2ML, explained how it all came about:

"It occurred to me after talking to somebody at Dayton that we don't own the 440 MHz spectrum alone. Most of you should be aware that we are merely secondary users so I wondered if the primary user was aware. The league contacted the NTIA National Telecommunications Information Agency, which is the government FCC and in turn, the NTIA contacted the real user, the US Navy. The Navy has just spent some 75 billion dollars (Billion with a B) on a little thing called the Combat Engagement System. CES operates in that 400 MHz band also. So the Navy was real unhappy about the idea of sharing the band with anybody. Of course, with the Navy, they have their own idea of jammer hunting that is significantly different than ours. They also have the hardware to enforce what they desire."

Steve Mendelsohn, W2ML

The fact that the Navy is siding with amateur radio does not mean that the fight to save the 70 centimeter band is over. Congress wants more military spectrum turned over to the private sector for commercial use and the FCC is under pressure to consent to these demands. As such, ham radio operators cannot afford to become complacent. The battle is not over yet.

(Via Newsline)

+ W0DK QSL Card Contest +

Do you have a great picture of Boulder or the surrounding countryside? BARC is printing new QSL cards and we want to use your photo. The selected photo will have the winning photographer's credit published on every QSL that W0DK sends around the world and beyond! You'll be famous worldwide and intergalactically!

Mail your entries to BARC's PO Box or bring them to the BARC picnic. The winning photo will be selected by club vote at the July picnic and club meeting.

For All You Computer Nerds Out There, Here Are Some Acronyms You Should Know:

DOS: Defective Operating System.
BASIC: Bill's Attempt to Seize Industry Control.
IBM: I Blame Microsoft.
PCMCIA: People Can't Memorize Computer Industry Acronyms.
ISDN: It Still Does Nothing.
APPLE: Arrogance Produces Profit Losing Entity.
SCSI: System Can't See It.
DEC: Do Expect Cuts.
CD-ROM: Consumer Device. Rendered Obsolete in Months.
OS/2: Obsolete Soon, Too.
WWW: World Wide Wait.
MACINTOSH: Most Applications Crash. If Not, The Operating System Hangs.
PENTIUM: Produces Erroneous Numbers Through Incorrect Understanding of Mathematics.
COBOL: Completely Obsolete Business Oriented Language.
AMIGA: A Merely Insignificant Game Addiction.
LISP: Lots of Infuriating & Silly Parentheses.
MIPS: Meaningless Indication of Processor Speed.
WINDOWS: Will Install Needless Data On Whole System.
GIRO: Garbage In Rubbish Out.
MICROSOFT: Most Intelligent Customers Realize Our Software Only Fools Teenagers.

From the August 1997 issue of "The BPARC Communicator", the newsletter of the Buena Park ARC, Bob Painter, WA6PLM Editor.

Attributed to KB6CMO

This article appeared in the November 1997 ARNS Bulletin, Steve Auyer-N2TKX, Editor.

W0DK

Boulder Amateur Radio Club
PO Box 17362
Boulder, CO 80308-0362
U.S.A.



Date Time Frequency RST Sent RST Rcvd Mode

BARC MEETING, 16 June 1998

Jack Ciaccia, WM0G, our Club President, conducted the June meeting. We paid particular welcome to a new ham who passed his novice, tech and general written and code exams in one sitting at the recent BARC VE testing session, as well as Gary, KI0BM, who upgraded to extra at the same testing session. We also had a few guests—Ben Layman, Jim Layman's son, Jennifer Casler, KB0UBW, Dave Casler's daughter, and Linda, the mother of one of our BARC Juniors, Crystal. A total of 27 people were at the meeting, one of our best-attended meetings in some time.

The minutes of the last meeting, as printed in BARC's BARK, were approved without change. Dave Casler gave the treasurer's report, noting the club has a healthy treasury, but that we are starting to see some cash outflow as we prepare for BARCFest.

Rip, NV0M, noted the repeater is doing well. He recently inspected the antenna mounting and reported no loose hardware.

Dan, N0NLS, reported the club membership now stands at 156, with four recent new members. We are a growing organization!

Ellie, N0QCX, reported BARC Junior is doing well. The kids are very excited about Field Day, one of the big events for them every year. This will be their third year to run their own Field Day operation. They plan to run class 3A with an additional Novice/Tech station.

Jim, N0VLE, reported the programs are lined up for the rest of the year, as listed in BARC's BARK. All the speakers look very interesting.

There were no interference problems to report; the tech/interference committee is prepared to help if there are any.

BARCFest is coming up. Flyers are now being printed, and will be distributed in July. Club members are encouraged to solicit freebies to give away as door prizes. We have already purchased our major door prizes, which will be four HTs. We received a letter from the ARRL approving our BARCFest as the host for the Colorado Convention, which will take place from 8:30am until 9:30am. Rosalie White, WA1STO, from the ARRL Educational Activities Department has confirmed her appearance to run the youth forum. BARC is paying for her hotel room. There will be eight to ten BARC Juniors in the youth forum, and prizes will be available for them as well. Kids are encouraged to attend the

youth forum. The BARC website (www.thisistrue.com/barc) has a reservations form for BARCFest. There will be VE testing at 10am at the Red Cross building in conjunction with BARCFest.

The club picnic will be July 21st, from 6 to 9pm at Martin Park in Boulder. The club will provide the food and drink (soft drinks and main course from Kaddy Shack BBQ). Please RSVP to our secretary so we can get a head count.

There will be a fox hunt at the picnic, so come prepared for that as well!

Bob, NQ5P, reported difficulties getting a site for the BARC Senior Field Day site. They also needed another popup camper and a cook, as well as 20' masts. The site will also run 3A, and Chuck will have his satellite station on the air. Jack Ciaccia has an Excel program that will consolidate the score sheets. Jack was particularly complimentary about the Field Day committee's work—in very short order they have put together a great Field Day plan!

Greg Schlender continues to work getting our club's 501(c)3 status straightened out so we can be considered a charitable organization. There are some funds being held for us at United Way that we can't get until this is fixed. Note this designation, once received, will cover BARC Junior as well.

We received a nice thank-you note from the folks who ran the MS Walkathon, thanking the club for providing communications for their annual fund-raiser.

Crystal wants to borrow Advanced theory tapes. Does anyone have any available? If so, please contact Ellie, N0QCX.

Chuck reported Phase IIID will not go on the Ariane 503. Currently there is no ride contemplated. It turns out Ariane has a paying customer for that capacity. If hams opt to pay full price for a reserved seat on the rocket, it could be fifty million dollars. It may be several years before another free or low-cost ride is available.

Jack announced a contest to select a photo to be on the club's QSL cards. The photo should reflect the Boulder area. The photo to be used will be selected at the July meeting. The prize will be the photographer's name credited on the QSL card.

Jack noted an organization called the LMCC, (Land Mobile Communications Council), is trying to get part of the amateur 440 band. The AAA is part of LMCC; Jack reported he received a favorable response from AAA when he wrote to them. Jack noted we need to use our spectrum more.

Crystal's Mom spoke about a non-ham's

perspective regarding taking a kid to Dayton. She noted it takes courage for kids to go through this process, along with lots of hard work by many people. She spoke of the crowds, the excitement, and her joy at seeing her daughter be part of the BARC Junior Dayton contingent. She noted being a ham is about making friends and connections, and thanked BARC Senior for their role in perpetuating ham radio into the next generation.

Jack presented an idea from the board that the club purchase a low-cost scanner to help with newsletter preparation using club funds. A motion was presented and seconded, and the motion passed.

Our break featured home-made cookies from Karen Layman. The large pile of cookies went very quickly. Thanks, Karen!

Our speaker was Dave Sharpe, KI0HG. He spoke at length on fox hunting, showing various techniques and his considerable array of equipment. Fox hunting is a favorite ham radio activity (particularly among our BARC Juniors!) and he successfully conveyed his enthusiasm for the sport. He noted there are weekly fox hunts in the area—those interested should contact him.

Respectfully submitted,

Dave Casler, KE0OG, Treasurer

(Randy Cassingham, K0RCC, being out of town)

New Vanity Fee Set

The vanity call sign application fee will drop to \$13 effective September 14, 1998, according to Terry Johnson in the FCC's Office of Managing Director. The new fee will be for the ten-year term, payable at the time of application for a new, renewed, or reinstated license. The current vanity call sign application fee is \$50. Earlier this year, the FCC had proposed dropping the fee to \$12.90. The actual fee was "rounded up," Johnson said.

The FCC says it has no plans to refund the difference between the current fee and the new fee for applicants who submit applications before the new fee schedule goes into effect in September.

The FCC released its revised schedule of regulatory fees for all services for fiscal year 1998 this week, and it's soon expected to be available on the FCC's Web site. The FCC calculated the new fee based on an expected 10,000 applicants during FY 1998.

("Exercise" cont. from page 5)

This flexibility was very useful, since the paramedics and the fire departments were unable to make cell phone calls or communicate on the EMS frequencies from this mountain canyon site.

The goal of the exercise was to test and practice systems such as incident command, triage, and extrication. The ham goal was to provide local TV coverage and tapes for possible later use, as well as provide communications to Boulder Community hospital. These goals were achieved.

Nine amateurs participated, putting in about 6 hours each.

Lessons Learned:

1. No matter how inviting the weather is, DO NOT set up BCARES equipment out in the open. Use the tailgate of a car or van. Rainstorms or wind can come up at the drop of a hat.
2. Be sure to send all priority traffic via both voice and via packet. This will assure that the message will be received quickly and accurately. Be sure to correctly annotate time in each packet message.
3. All messages must be written in plain text, and the message content clearly understood by the BCARES member passing the traffic.
4. All messages should be logged, as one message was not received due to an addressing error on packet. This was not discovered until after the event.
5. Several antenna problems were found on the Incident Command Vehicle and will be remedied in the near future.
6. Bring along extra repair and diagnostic equipment, since inevitably, Murphy will cause there to be a need. Duct tape and ingenuity will always be required. Spare equipment can be invaluable.

Topics to consider in the future:

1. Perform a site survey within Boulder County to determine how well packet and voice communications can be established. Use pre-existing County staging areas. This would be a completion of work done some years ago.
2. Conducting this October's SET with another local ARES group.

Submitted by:

Mike Bartosewicz N6TOL and Richard Ferguson, KA0DXM - BCARES

Issued Call Signs

The following is a list of FCC sequentially assigned call signs issued as of May 4, 1998 for the 0 Call District:

Group A	Group B	Group C	Group D
<u>Extra</u>	<u>Advanced</u>	<u>Tech/Gen</u>	<u>Novice</u>
AB0HQ	KI0NH	+++	KC0DQD

+++ = All call signs in this group have been issued in the 0 Call District.

(ARRL Newsletter - Jun 12, 1998)

New Prefix for Pitcairn:

The new prefix for Pitcairn Island in the South Pacific is VP6. The British possession changed its call sign prefix from VR6 to VP6 on May 1. Call sign suffixes will remain the same.

As part of the reversion of Hong Kong to China, the British government also ceded the international ITU prefix block, VRA-VRZ, to China.

Old timers may recall that VP6 used to belong to Barbados before it became independent.

(ARRL Newsletter)

The Phonetic Alphabet, Now and Then...

How did our phonetic alphabet come to be? Was it always the same as the present version? If so, why are all those guys in old movies using a different set of words for each letter? A recent trip to the Signal Corps Museum at Ft. Gordon, GA helped me out. There have been at least four "official" phonetic alphabets - according to the US Army. Here is how they have changed over the years:

	US Army Signal Book 1916	US Army FM 24-5 1939	Radio News Vol 31 # 2 1944	US Army FM 24-17 1961
A	Able	Afirm	Able	Alfa
B	Boy	Baker	Baker	Bravo
C	Cast	Cast	Charlie	Charlie
D	Dock	Dog	Dog	Delta
E	Easy	Easy	Easy	Echo
F	Fox	Fox	Fox	Foxtrot
G	George	George	George	Golf
H	Have	Hypo	How	Hotel
I	Item	Inter	Inter	India
J	Jig	Jig	Jig	Juliett
K	King	King	King	Kilo
L	Love	Love	Love	Lima
M	Mike	Mike	Mike	Mike
N	Nan	Negat	Nan	November
O	Opal	Option	Oboe	Oscar
P	Pup	Prep	Peter	Papa
Q	Quack	Queen	Queen	Quebec
R	Rush	Roger	Roger	Romeo
S	Sail	Sail	Sugar	Sierra
T	Tare	Tare	Tare	Tango
U	Unit	Unit	Uncle	Uniform
V	Vice	Victor	Victor	Victor
W	Watch	William	William	Whiskey
X	X-Ray	X-Ray	X-Ray	X-Ray
Y	Yoke	Yoke	Yoke	Yankee
Z	Zed	Zed	Zebra	Zulu

By Carter Wood-KF4HLF. This appeared in the April 1998 issue of "The GARZETTE", the newsletter of the Gwinette ARC, Joe Biddle-AD4PZ Editor.

Ham Talk

By Bob Johnson, NQ5P

Sorry, no one got June's puzzler! ...

The answer: No, Elmer Fudd was right-on. SSB signals occupy a spectrum (so does CW depending on the speed, but its much less). USB occupies spectrum above the displayed frequency, and LSB occupies spectrum below the frequency. How much spectrum depends on the type of voice, as well as transmitter characteristics. Most transmitters and voices constraint this spectrum to about 3-5 KHz, so you will want to stay 5 KHz away from the upper band edge when operating USB, and the same amount away from the lower band edge when operating LSB. We use LSB on 40 meters so we can get very close to the upper band edge, and USB on 15 meters so we can get close to the lower band edge but not the upper edge. This was a very appropriate question given the number of Novices and Technicians (and Extras!) operating on Field Day with the club call and control operator privileges.

July Puzzler:

OK you hot dogs! You've been looking at this problem for quite awhile and didn't know it. The transistor amplifier circuit shown in the middle of this column has a weakness, easily solved by the addition of one component. What is the problem and the component, and where in the circuit should the component be added. Don't worry about selecting the value. As always, EMail with questions or your puzzler suggestion is appreciated.

OK, OK. We have reduced the requirements for Worked Almost-all Members to 25, 50, 75, 100, and 100 plus!!

You'll have to wait 'til I get some time to do some interviews of rabid DXers. I want to talk about Field Day.

What a Wonderful Fielding I get when I Contact You!

"Oh, what a wonderful fielding. Oh, what a wonderful day. Oh, what a wonderful fielding. Everyone's coming to my frequency!"

What a fine bunch of people we have in this club, and what promise of future Field Day events to come! We had approximately 18 guests visit us. Maybe more. And we had about 15 for dinner Saturday, and another 7

for breakfast.

My special thanks to Bernie, who carried the ball for me while I was on vacation just before Field Day and let us use his radio and trailer.

Chuck, I never realized how strong you must be to carry around those batteries! Your power system worked so well, and was such a great contribution to the team. If you missed Field Day, you really have to come next year just to see his battery/generator/solar cell system. By the way, have you ever thought about going into advertising, seeing how many co-workers you successfully invited to visit us?

Glenn and Bernie made such a team operating CW - no doubt this really jumped our score. I expect their encouragement and help will carry many a Novice and Tech through to the higher classes this next year. Look for some new class or broadcast to get us straightened out (to CW) coming from this team.

Now this was really exciting to me - a television link to another location! I can see where

this will really help us achieve one of the objectives of Field Day to make the public aware, and become a highlight in future years. Thanks Jim! I'm sorry we were so distracted with other problems that we didn't take advantage of this technology to the fullest.

Dave, I'm looking forward to seeing your photos at the next meeting!

Bruce, the supper was excellent, and you were such a help with all the setup and take down.

Darrell Benter, you get the award for helping out. If I'm on the Field Day Committee next year, I want you there too!

Gary, your expertise quickly solved one of the antenna problems during setup. We noticed you helped both to set up and take down out of proportion to your operating. Thank you, and we want you operating more next year (if you want).

Russell, thanks for the loan of your radio and the two antennas. Bernie was so impressed that he wants one of those GR5Vs. And just think, you got both of your antennas working!

We had four walk on operators - Greg, Jack, Paul (from California), and Eric. You kept things moving when we were tired, and

showed us a trick or two.

Setup took 5 hours, mostly due to last minute changes in antennas and the heat. As a club, we are going to put up a beast of an antenna next year!!!! Right? All in favor, say aye!

Takedown took a little over an hour, and everyone stayed and helped. Thank you!

LARC Scholarship

The Longmont Amateur Radio Club is offering a \$500 scholarship to a recent high school graduate enrolled in an accredited college or university. The applicant must have a current amateur radio license and live in Boulder Valley, St. Vrain school districts or from the surrounding areas. Applicants from public, private, religious or home schools are welcome to apply. The scholarship is for the 1998-99 school year. Because of the time restraints we ask that the applications be mailed directly to the scholarship committee at the following address no later than **July 15th**.

Coralyn Stransky (N0NWT)
11330 North 59th Street
Longmont, CO 80503

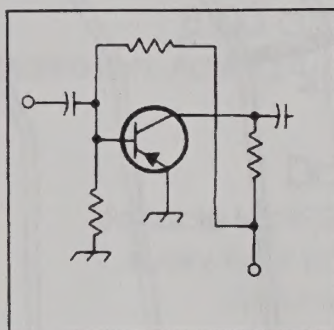
Or you may fax your application to Coralyn Stransky at: 303-776-9845

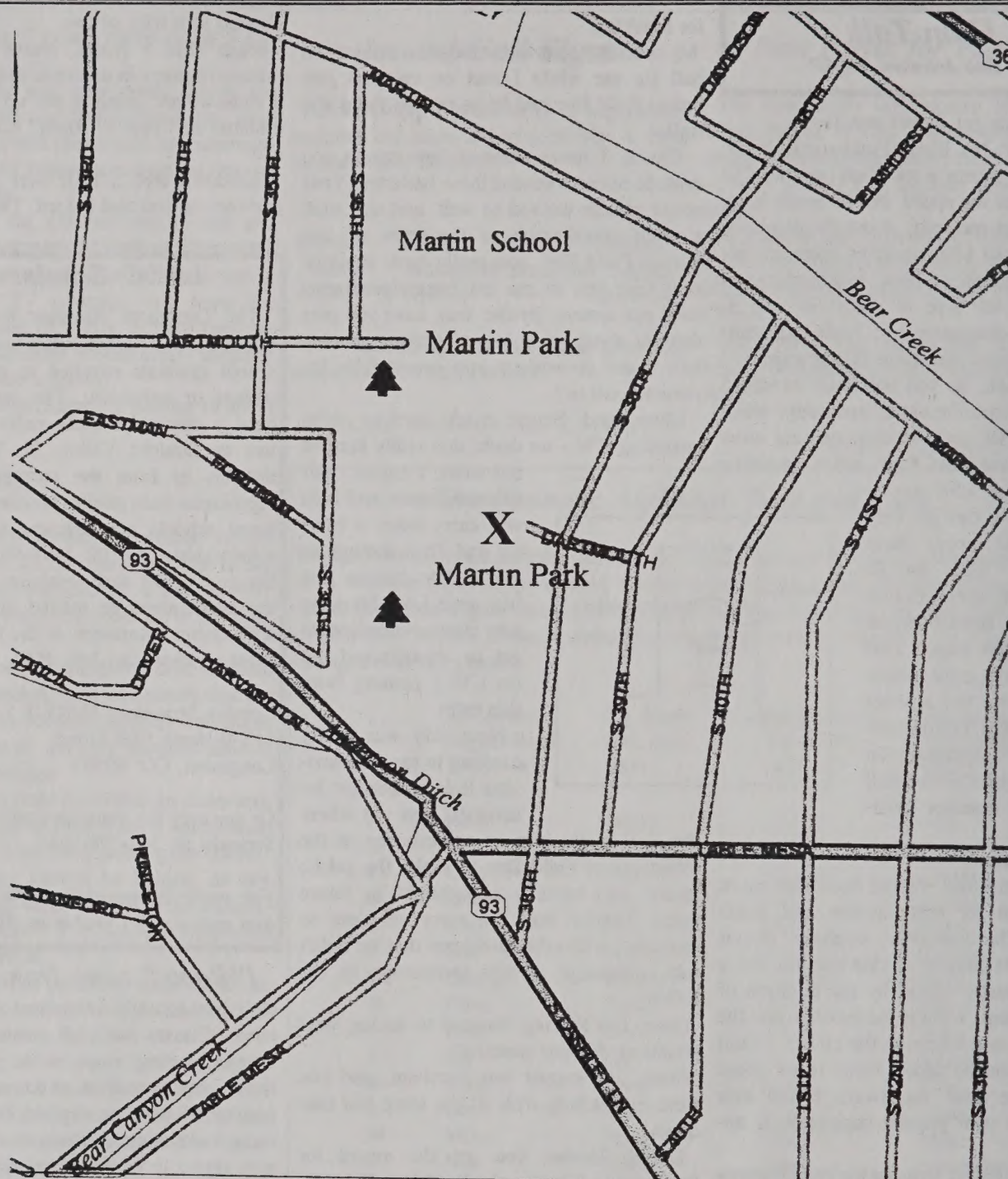
For more information or for an application please call Coralyn at: 303-776-2110.

("Roots" cont. from page 3)

club has recently celebrated its 100th licensee. Classes and club meetings now take up nearly every room in the Van Winkle's home, with handfuls of knowledgeable and patient "Elmers" to explain every aspect of radio and communications at all levels. I am very proud to have had involvement in this fine organization nearly since the beginning, and thankful for the opportunity to become a part of such an incredible hobby. My six years of radio have given me many experiences which I'm sure will benefit me for a lifetime I look forward to seeing which direction BARC Jr. will take in the future, and although I have reached the club graduation age, I hope that I can still join the club for the occasional special event All members of the hobby should be thankful that the future of radio clearly lies in good hands.

See you down the airwaves,
Eric/KGOYS, "The Yellow Submarine"

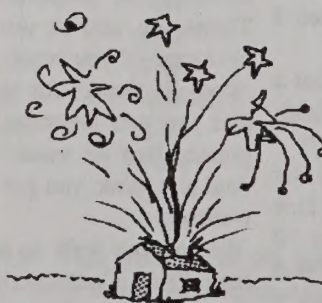




BARC picnic site map

ELMER

by Rich Regent (reprinted from ARNS bulletin)



The Boulder Amateur Radio Club presents the 45th Annual

BARCfest

Amateur Radio & Computer Swap

Sunday, September 27, 1998 at the
Boulder County Fairgrounds
Longmont, Colorado

8:00 a.m. to 2:00 p.m.

Admission: Adults \$4, age 13-18 \$2, 12 & under free

Door Prizes!

Portable Ham Radios to be given away
every hour from 9:00 a.m. to noon!
And many other prizes

1998 Special Attractions!

ARRL Colorado Section Annual Convention

Meet your ARRL area representatives.

VE Testing

Get or upgrade your license. Begins at 10:00 a.m.

Youth in Amateur Radio Forum

What's the future of ham radio? Find out what BARC and BARC Jr. is doing to bring youngsters into our hobby. Bring your kids to see what other kids are doing!

Special Guest Moderator: Rosalie White, WA1STO, of ARRL Headquarters' Education Division.

All kids (<18) in Attendance Eligible for Prizes

Boulder County's Emergency Communications Van

Mobile Command Post for emergency communications for law enforcement, fire, and disasters includes Boulder County Amateur Radio Emergency Service (BCARES) packet, ATV, 2 meter and 440 MHz amateur stations.

Also: a Fast Scan color Amateur Television (ATV) demonstration.

Information Updates:

See <http://www.thisistrue.com/barc.html>
or call 380-6540 (24 hrs)

*See other side for
Vendor Table information.*

BARCfest Table Reservations

Sunday, September 27, 1988
Boulder County Fairgrounds, Longmont

Cost: \$10.00 per table pre-paid (\$15 at the door).
One admission included with each paid table.

Tables Assigned on First Come, First Served Basis

Your request must be Postmarked by September 18, 1998

Yes, Please reserve _____ tables at \$10.00 each = \$_____.

Plus add _____ extra admission tickets at \$4.00 each = \$_____.

For a total of \$_____, enclosed.

We need AC power at our table(s): __Yes / __No

Contact Name: _____

Company Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

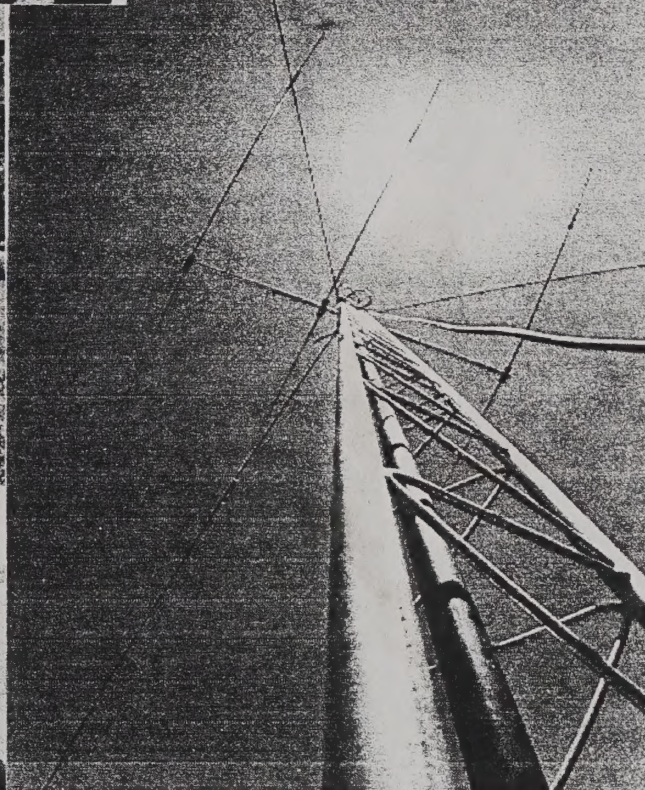
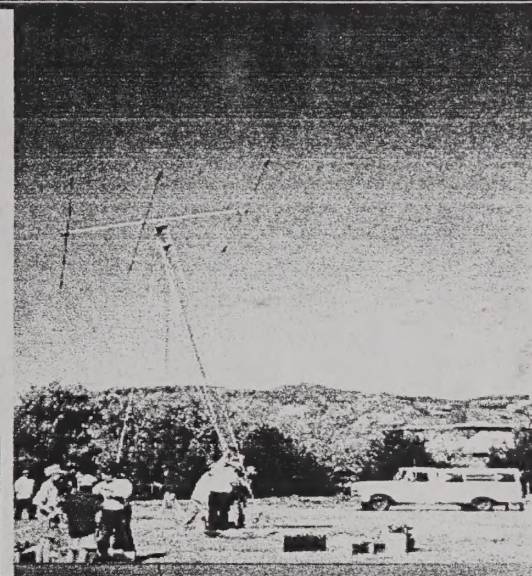
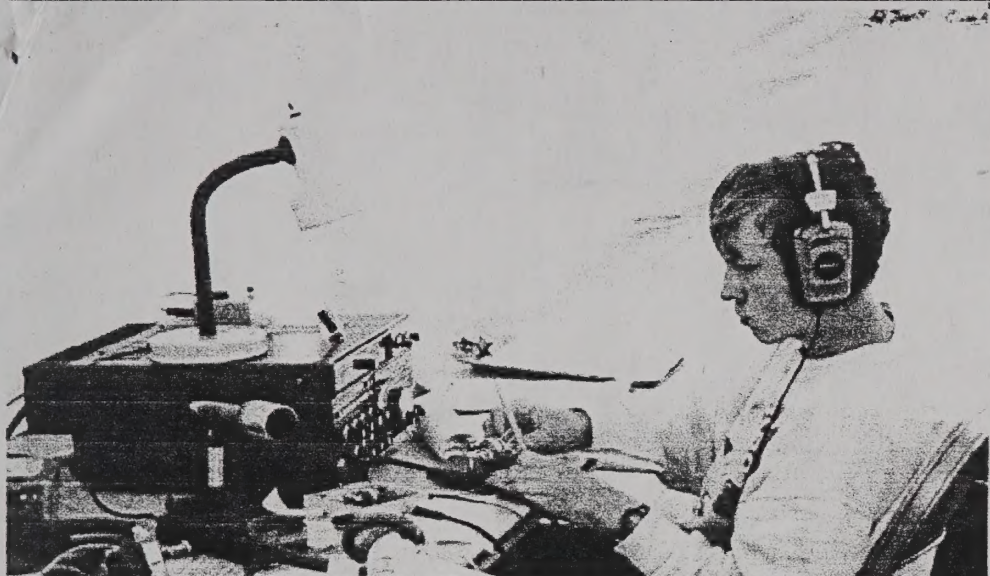
Phone: (____) _____ Fax: (____) _____

Mail this entire page with check for full amount made payable to BARC to:

BARC

PO Box 17362
Boulder CO 80308

Your request must be Postmarked by September 18, 1998



1998 Boulder Amateur Radio Club Membership / Renewal Application

The **BARC** Membership year is from January 1 to December 31.

Please supply all the information requested below :

Date: _____ Call: _____
 Name: _____
 Other Family Member Name: _____ Call: _____
 Address: _____
 City & State: _____
 Zip Code +4: _____
 Phone: _____ E-Mail: _____

Membership type: _____ {R, C, A}
 License Class: _____ {E,A,G,T+,T,N or blank}
 Year Licensed: _____ (Year first license was granted)
 ARRL Member: _____ (Y or N) License Expires: _____

REMINDER: BARC membership dues are payable at the first of the year. If you are a **BARC Jr.** whose family does **NOT** belong to **BARC** (not part of a family membership), then your yearly dues are also due January 1st. If you want to pay now, your dues will be paid through December, 1998.

Membership Types:

R (Regular) -- \$ 18 / year

Note: Family members are included in regular memberships in the same household.

C (Child) -- \$ 6 / year*

*Child memberships are for children 17 years of age or younger whose parents are **not** members of B.A.R.C.

A (Associate) -- \$ 18 / year

**Make checks payable to B.A.R.C.
and Mail to :**

**B.A.R.C. Membership
P.O. Box 17362
Boulder, CO 80308-0362**



B.A.R.C.'s Bark

**Boulder Amateur Radio Club
P.O. Box 17362
Boulder, CO 80308-0362**

Jul 21 - BARC Annual Picnic and Fox Hunt. This year we will have a **catered BBQ** provided by BARC - RSVP with the number of members & family attending via the BARC 'HotLine' or via BARC's EMail address. After the BBQ, the "Foxes" will be let loose - Bring along your RDF gear. - BARC's Picnic Site is Martin Park.